Crosscountry Canada Photo Safari

TEACHER RESOURCE GUIDE

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Software program and documentation made in Canada.
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Using Crosscountry Canada Photo Safari in Your Classroom

Crosscountry Canada Photo Safari is an interactive science and geography program designed to teach and strengthen many different skills. Students become wildlife photographers and are assigned to take pictures of animals on their journey. The program encourages students to have fun while they learn:

- facts about Canada (weather, terrain, cities, capitals, population and more)
- basic map-reading and map-interpretation skills using a GPS system
- how to budget (time, distance and expenses)
- problem-solving skills
- an understanding of animal habitats
- what animals need to survive (adaptations)
- the appearance and behaviour of animals
- about human impact on animals.

The program may be played on different levels.

Younger children tend to use the program at an introductory level. They learn basic facts about map reading and the differences in terrain across the country. Crosscountry Canada Photo Safari also teaches students where cities, provinces and territories are located, as well as where endangered animals live.

We have included a saved game (western.sav) with the program for users who would like to have direct access to some of the animal information in the Photo Album.

Older children tend to use the program on a more complex level. They learn the facts, but they also learn methods for determining the fastest, most cost-effective route to their destination. In addition, older children learn about animals' life cycles, human impact on animals, and ecosystems.

The game is an excellent tool to promote geographical literacy. It also helps broaden children's knowledge about Canada while developing higher-level thinking skills.

**Note:* The animals in Crosscountry Canada Photo Safari were selected based on their status as determined by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). For more detailed information on any of these animals, visit http://www.speciesatrisk.gc.ca.

An animal's status (i.e. endangered, threatened, or special concern) may change depending on a variety of factors. Also, animals may be listed differently at the provincial, territorial and federal levels.

Sample Game

In Crosscountry Canada Photo Safari, players set out on a fascinating mission to find and photograph endangered animals. This simulation lets players drive a truck through every province and territory and up to 79 cities and towns in search of animals. Driving safely and staying healthy along the way is very important for a successful journey.

This sample game is the fastest way to learn the basics of Crosscountry Canada Photo Safari. You should be up to speed in about 15 minutes.

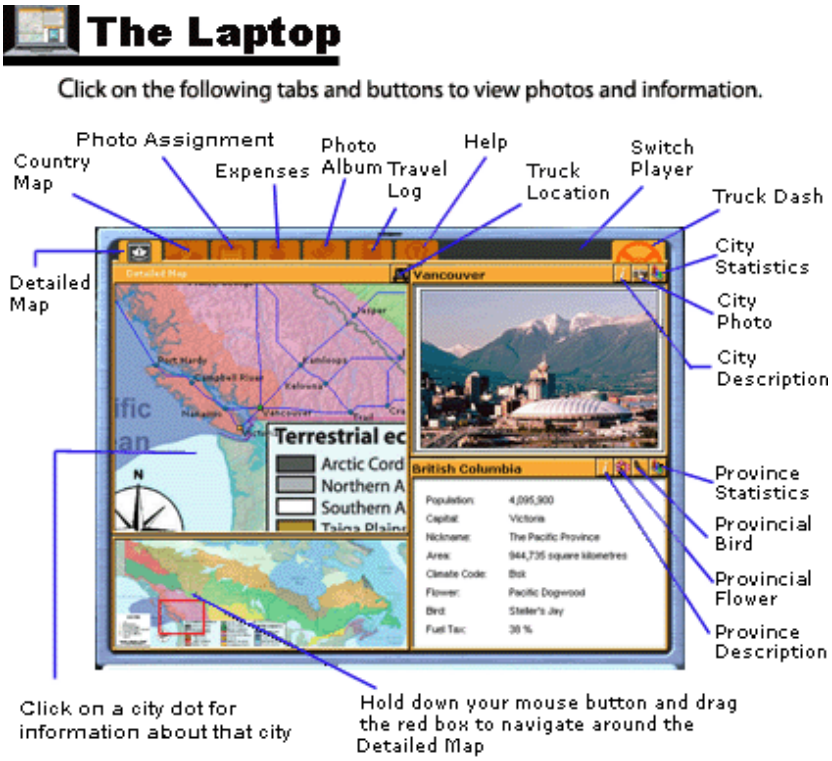
Follow these learning steps:

Launch the Crosscountry Canada Photo Safari program and click the 'Load Scenario' button. At 'Number of Players', click the '1' button. Under 'Scenario', click 'sample.scn'.

Click the 'Load Scenario' button. Your 'Photo Assignment' appears. This assignment gives you critical information that you need to play your sample game.

Click the 'Country Map' tab (look for the 'N' in the upper-left corner of the screen). A map of Canada appears. The map shows you where your truck is currently located and your destination city. The Country Map also shows you where to find the animals you need to photograph. You may look at this screen at any time during the game.

In the sample game, your truck is in Saskatoon, Saskatchewan, and your destination city is Vancouver, British Columbia. Your mission is to photograph a piping plover and a pallid bat. Then you will deliver the photographs to Vancouver.



For this sample game, photograph the piping plover first. According to the map, you may find piping plovers near Calgary, Alberta; Kenora, Ontario; and Summerside, Prince Edward Island. Since Calgary is the closest city to Saskatoon and is on the way to Vancouver, go to Calgary first.

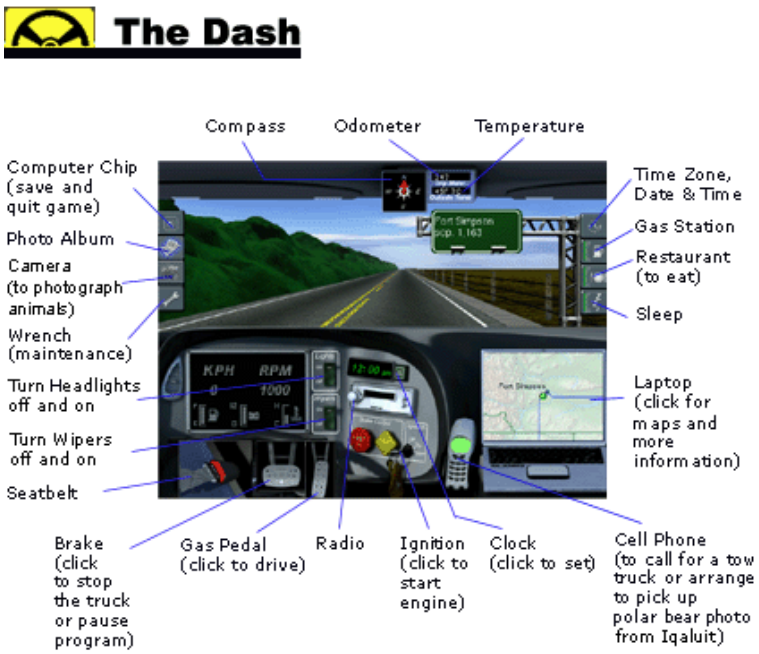
Click the 'Detailed Map' tab (look for the 'Highway 1' tab in the upper-left corner of the screen) to plan your route. Press and drag the small red box to navigate around the map. Then click the 'Dash' icon (look for the steering wheel in the top right-hand corner of the screen) to get back to the cab of the truck. Click the seatbelt to buckle up. Click the key in the ignition. The key turns to the 'on' position.

On your compass at the top of the windshield, click the direction in which you would like to go (all possible directions are lit up in green). In this case, choose west. Finally, click the gas pedal and you will start to drive. You are now driving west toward Calgary.

Once you arrive in Calgary, click the 'Camera' icon on the left-hand side of the windshield, and then click the 'Photo' button. A photo of the piping plover appears on your screen for a moment. To find out more about the piping plover, click the 'Photo Album' icon, then click 'View Photo,' and finally click the 'Animal' tab. Here you can read and hear a description of the piping plover as well as see more photos.

Next, you'll need to find and photograph a pallid bat. Looking at the Country Map, you'll see that pallid bats live near Kelowna, BC.

As you can see from the Detailed Map, the shortest route to Kelowna is via Banff. Click the 'Dash' icon to get back to the cab of the truck. Click west on your compass, and then click the gas pedal. Continue until you reach Kelowna.


The Dash
Compass
Odometer
Temperature
Computer Chip (save and quit game)
Photo Album
Camera (to photograph animals)
Wrench (maintenance)
Turn Headlights off and on
Turn Wipers off and on
Seatbelt
Time Zone, Date & Time
Gas Station
Restaurant (to eat)
Sleep
Laptop (click for maps and more information)
Brake (click to stop the truck or pause program)
Gas Pedal (click to drive)
Radio
Ignition (click to start engine)
Clock (click to set)
Cell Phone (to call for a tow truck or arrange to pick up polar bear photo from Iqaluit)

While you are driving, keep an eye on the 'Sleep' (ZZZ) and 'Restaurant' (dinner plate) icons on the right-hand side of your screen to ensure that you are not tired or hungry. If you decide to eat or sleep, click the appropriate icon. The cost is added to your expenses.

If you crash or run out of gas between cities, you can rescue yourself by selecting 'Tow Truck' from the cell phone.

Once you get to Kelowna, click the 'Camera' icon, and then click the 'Photo' button. Now you have taken photographs of all of your assigned animals. Next, you must deliver them to your destination city, Vancouver.

At this point, you need to choose between two routes. As you can see from the Detailed Map, travelling to Vancouver via Kamloops requires less driving than travelling to Vancouver via Trail. Continue on to Vancouver using the map and compass.

Once you arrive in your destination city, you have completed your mission. Study your Travel Log. Did you make good choices? If so, congratulations!

Recommended Classroom Use

Crosscountry Canada Photo Safari can be used in the classroom (grades 1 through 4) in a variety of ways:

- One player on one computer
- Two players or two groups of two on one computer
- Two players using a two-player game
- As group activities

We recommend two players (or two groups of two) play on one computer. This strategy promotes collaboration, teamwork and communication.

Educational Objectives

Crosscountry Canada Photo Safari can be seamlessly integrated into a regular social studies/geography/science program and complement a textbook, direct instruction, and class assignments. The program is a valuable instructional tool that adds excitement and variety to the concepts and skills covered in class.

Through multimedia, students can interactively learn basic skills related to map reading and map interpretation, plan routes, make decisions and learn about Canadian geography.

Crosscountry Canada Photo Safari is a "real life" simulation program. While driving across Canada, students learn about the relationship between time, distance and money. Students can make decisions and then analyze their Travel Log to determine if they made wise choices.

For example, the photo editor may offer the player a $350 bonus to photograph a specified animal. The decision to accept or decline is left entirely with the player. The player will need to compare the cost and amount of gas it will take to photograph the animal versus the $350 bonus.

Skills and knowledge

Crosscountry Canada Photo Safari reinforces the following skills and knowledge:

- Map reading, direction, interpreting symbols, calculating and estimating distances, latitude and longitude, and locating information
- Political geography: locating cities, provinces, territories, capitals and animals
- Spatial relationships and distances between cities, provinces and territories
- Physical geography: some knowledge of terrain
- Higher-level thinking skills such as decision making, problem solving and strategy planning
- Time zones: Crosscountry Canada Photo Safari can be used to teach the concept of changing time zones

The program supports the following social studies elements:

- Distinguish between city, province, territory and nation
- Describe landforms and climates of various regions of Canada
- Describe the geographic regions of the country
- Locate places of historical significance in Canada

Crosscountry Canada Photo Safari also supports the following science elements:

- Understand animal habitats
- Describe the appearance and behaviour of animals
- Discover what animals need to survive
- Understand animal adaptations to different environments
- Learn about human impact on animals

Methodology

Introduce

Discuss the skill or concept being taught. Before introducing Crosscountry Canada Photo Safari, your students should have basic knowledge of Canadian geography. We recommend that you cover the following vocabulary: region, province, territory, direction, compass, endangered and extinct.

Demonstrate

Using a projector, show your students how to use the program. Make sure that your students know where to access information on which to base their decisions.

After you have demonstrated the program, go to the Travel Log to discuss with the class how they might have taken a different route. Have students predict the outcome if alternate routes were taken.

Motivate

Set the goals. Encourage the students to collaborate and work as a team. Explain to them what they should do and approximately how long they will have to accomplish the task. For example, "You will break your group into two teams. After 20 minutes, I will check to see that each team has photographed at least one animal."

Depending upon the number of computers available, divide students into teams. The ideal group size is between two and four players per team. While Team 1 plays its planned game at the computer, Team 2 plans its game. The Route Planning Guide (page 34, suitable for photocopying) and the Small Maps (page 35) can be used to help plan the game.

The Small Maps can also be found **in colour** as Portable Document Format (PDF) files called 'small_map1.pdf' and 'small_map2.pdf' on the Crosscountry Canada Photo Safari CD-ROM. You can view and print these files if your computer has the free Adobe Reader software from http://www.adobe.com/products/acrobat/readstep2.html.

Assess

When students complete an assignment, a summary is generated at the bottom of the Travel Log. The summary includes the student's starting city, ending city, start and end dates, mileage, animals photographed, income and expenses. The Travel Log can help you determine whether students made wise and safe decisions during their assignment.

**Note:* Travel Logs are not automatically saved. You may wish to ask your students to save them so you can print and review them later. (For instructions on how to save and print Travel Logs, see the in-game Help > Basic Game Functions > Printing Travel Logs.) Alternatively, students can record their income and expense summary on paper and hand that in to you.

Lesson Plan

**Note*: Only the purpose and learning outcomes are listed here. The full lesson plan is included as a Portable Document Format (PDF) file on your Crosscountry Canada Photo Safari CD-ROM\Canada_PS\Game Materials. The file name is 'lesson_plan.pdf'.

Title: Animal Habitats Grade: 2–3 Time Required: 3–5 hours

Purpose:
This lesson uses a number of guided response strategies to help students explore the similarities and differences among animal habitats.

Students will:

- identify the food needs of at least one animal from each of the following groups: mammals, birds, fish, reptiles, amphibians, insects; describe changes in how each animal obtains food through different stages of its life (Animal Life Cycles)
- demonstrate awareness that parental care is characteristic of some animals and not of others, and identify examples of different forms of parental care (ALC)
- demonstrate awareness that animals require different habitats in order to meet their basic needs of food, water, shelter and space (ALC)
- recognize adaptations of a young animal to its environment, and identify changes in its relationship to its environment as it goes through life (ALC)
- formulate questions to guide observation and investigations (Applications of Science)
- identify patterns and groupings to draw conclusions from information (AS)
- construct models to represent ideas or concepts (AS)
- describe structures that enable animals to survive in different environments (Life Science)
- demonstrate a knowledge of what animals need to survive (LS)
- compare and contrast different types of animal life cycles (LS)
- explain how animals interact with one another (LS)

Scenarios

In Crosscountry Canada Photo Safari, a scenario is a wildlife-photography assignment. A scenario includes your starting city, your destination city, and the animals you are assigned to photograph along the way.

Scenarios are useful when you would like all players to have the same assignment. You can also assign different scenarios to individual students.

Students can play a number of prepared scenarios, or you can create your own.

Prepared Scenarios

In addition to the Sample Game, Crosscountry Canada Photo Safari includes 34 prepared (ready-made) scenarios created by a teacher. These scenarios focus on groups of species (e.g. birds, mammals, snakes, etc.), geographic areas, or a combination of the two.

To play a prepared scenario, start Crosscountry Canada Photo Safari. Then:

1. Click 'Load Scenario'.
2. Select the number of players.
3. Type in the player(s') name(s).
4. Select a prepared scenario from the 'Scenario' list.
5. Click 'Load Scenario'.

Scenario Name	**Starting City**	**Destination City**	**Animals to Photograph**
alberta_1.scn	Grande Prairie, AB	Medicine Hat, AB	Wolverine
			Grizzly bear
			Banff springs snail
			Piping plover
			Burrowing owl
alberta_2.scn	Edmonton, AB	Calgary, AB	Piping plover
			Greater sage-grouse
			Northern leopard frog
			Sprague's pipit
			Swift fox
amphibians_east.scn	Drummondville, QC	Brandon, MB	Allegheny Mountain dusky salamander
			Northern cricket frog
			Northern leopard frog

Scenario Name	Starting City	Destination City	Animals to Photograph
amphibians_west.scn	Medicine Hat, AB	Kamloops, BC	Northern leopard frog
			Rocky Mountain tailed frog
			Great Basin spadefoot
british_columbia_1.scn	Fort St. John, BC	Trail, BC	Wood bison
			White sturgeon
			American badger
			Nightsnake
			Pallid bat
british_columbia_2.scn	Victoria, BC	Fort St. John, BC	Vancouver Island marmot
			Marbled murrelet
			Sea otter
			Humpback whale
			White sturgeon
british_columbia_3.scn	Cranbrook, BC	Nanaimo, BC	Grizzly bear
			White sturgeon
			Great Basin spadefoot
			Northern spotted owl
			Killer whale
british_columbia_4.scn	Fort St. John, BC	Prince Rupert, BC	Rocky Mountain tailed frog
			Sockeye salmon
			Killer whale
			Marbled murrelet
			Sea otter
british_columbia_5.scn	Vancouver, BC	Victoria, BC	American badger
			Great Basin spadefoot
			Grizzly bear
			Killer whale
			Marbled murrelet

Scenario Name	Starting City	Destination City	Animals to Photograph
british_columbia_6.scn	Nanaimo, BC	Victoria, BC	American badger
			Great Basin spadefoot
			Grizzly bear
			Killer whale
			Marbled murrelet
birds_central.scn	Winnipeg, MB	Roberval, QC	Piping plover
			Peregrine falcon
			Red-shouldered hawk
			Henslow's sparrow
			Bicknell's thrush
birds_maritimes.scn	Edmundston, NB	Halifax, NS	Bicknell's thrush
			Piping plover
			Roseate tern
			Harlequin duck
birds_north+west.scn	Inuvik, NT	Port Hardy, BC	Peregrine falcon
			Whooping crane
			Piping plover
			Burrowing owl
			Greater sage-grouse
			Northern spotted owl
			Marbled murrelet
butterflies.scn	Charlottetown, PE	Fredericton, NB	Monarch
			Maritime ringlet
fish_east.scn	Fredericton, NB	Digby, NS	Atlantic salmon
			Atlantic cod
			Atlantic whitefish
fish_west.scn	Cranbrook, BC	Victoria, BC	White sturgeon
			Sockeye salmon

Scenario Name	Starting City	Destination City	Animals to Photograph
mammals_east.scn	London, ON	Labrador City, NL	American badger
			Woodland caribou
			Polar bear
mammals_north.scn	Yellowknife, NT	Inuvik, NT	Woodland caribou
			Wolverine
			Grizzly bear
			Wood bison
			Polar bear
mammals_west.scn	Edmonton, AB	Campbell River, BC	Wolverine
			Swift fox
			Grizzly bear
			Wood bison
			American badger
			Pallid bat
			Vancouver Island marmot
			Sea otter
molluscs.scn	Banff, AB	London, ON	Banff springs snail
			Northern riffleshell
new_brunswick+pei.scn	Charlottetown, PE	Edmundston, NB	Piping plover
			Monarch
			Atlantic salmon
			Bicknell's thrush
			Maritime ringlet
newfoundland_lab+nunavut.scn	Labrador City, NL	St. John's, NL	Polar bear
			Wolverine
			Atlantic cod
			Harlequin duck
			Leatherback seaturtle

Scenario Name	Starting City	Destination City	Animals to Photograph
nova_scotia.scn	Sydney, NS	Digby, NS	Bicknell's thrush
			Atlantic salmon
			Atlantic cod
			Leatherback seaturtle
			North Atlantic right whale
			Roseate tern
			Atlantic whitefish
			Harlequin duck
			Blanding's turtle
nw_territories+yukon.scn	Watson Lake, YT	Fort Simpson, NT	Beluga whale
			Peregrine falcon
			Polar bear
			Wood bison
			Woodland caribou
			Wolverine
			Whooping crane
ontario_1.scn	Timmins, ON	Sault Ste. Marie, ON	Piping plover
			Peregrine falcon
			Massasauga
			Eastern hog-nosed snake
ontario_2.scn	London, ON	Windsor, ON	Eastern hog-nosed snake
			Blue racer
			Northern riffleshell
			Lake Erie watersnake
			Spiny softshell
			Northern cricket frog

Scenario Name	Starting City	Destination City	Animals to Photograph
ontario_3.scn	Niagara Falls, ON	Ottawa, ON	American badger
			Henslow's sparrow
			Red-shouldered hawk
			Eastern ratsnake
quebec_1.scn	Baie-Comeau, QC	Roberval, QC	Atlantic cod
			Monarch
			Red-shouldered hawk
			Allegheny Mountain dusky salamander
			Peregrine falcon
quebec_2.scn	Sept-Îles, QC	Rouyn-Noranda, QC	Beluga whale
			Humpback whale
			Bicknell's thrush
			Woodland caribou
			Spiny softshell
saskatchewan+manitoba.scn	Key Lake, SK	Flin Flon, MB	Sprague's pipit
			Monarch
			Burrowing owl
			Northern leopard frog
			Woodland caribou
snakes.scn	Kelowna, BC	Ottawa, ON	Nightsnake
			Massasauga
			Eastern hog-nosed snake
			Blue racer
			Lake Erie watersnake
			Eastern ratsnake
turtles.scn	Trois-Rivières, QC	Yarmouth, NS	Spiny softshell
			Leatherback seaturtle
			Blanding's turtle

Scenario Name	Starting City	Destination City	Animals to Photograph
whales_east.scn	Sept-Îles, QC	Halifax, NS	Beluga whale
			Humpback whale
			North Atlantic right whale
whales_west.scn	Victoria, BC	Prince Rupert, BC	Killer whale
			Humpback whale

Scenario Creator

To create a scenario of your own, start Crosscountry Canada Photo Safari. Then:

1. Click the 'Scenario Creator' button on the Main Menu.
2. Select your Starting City and your Ending City (the two cannot be the same).
3. Select the animals to photograph. To do this, click an animal's name. Then click the 'Add' button for that animal. (**Note:* You can only add 1 animal at a time to a maximum of 12, and all the animals must be different.)
4. If you wish, select a bonus animal to photograph, then click 'Bonus'.
5. Review your choices. If you have made any mistakes, click the 'Clear' button to start over again from step 2.
6. Type a file name for the scenario. (**Note:* The file name must be less than 27 characters. It will automatically be given the extension '.scn'.)
7. Click 'Save'.

To play your new scenario:

1. Click 'Main Menu'.
2. Click 'Load Scenario'.
3. Select the number of players.
4. Type in the player(s') name(s).
5. Select your new scenario from the 'Scenario' list.
6. Click 'Load Scenario'.

All scenarios you create are saved as 2-player games; however, you can choose the 1-player option when you start the game.

To find out the directory in which your scenarios will automatically be saved, click the 'Options' button on the main page. All of your directories are listed there.

Deleting saved games

Go to the Main Menu and click the 'Options' button. All saved games are located in the Saved Games folder in the Crosscountry Canada Photo Safari folder. Make note of the location of the Saved Games folder.

It's easy to delete games, so be careful. Quit Photo Safari, then browse to the Saved Games folder and simply delete any game files you wish (avoid deleting western.sav).

Ecozones – Teacher Reference Materials

An ecozone is an area of the world in which the combination of climate, soil, plants and animals is about the same throughout. An ecozone also has about the same combination of water, landforms, underground rocks, and human activities.

Canada has 20 ecozones. Fifteen are terrestrial, and five are marine. A brief summary of each ecozone follows.

**Notes:*

1. Small Map 1 (see the Game Materials section on page 25 of this guide) shows the locations of Canada's ecozones. The large paper map included in the CD-ROM case and the Detailed Map in the Laptop also show you Canada's ecozones.
2. For more-detailed information on Canada's ecozones, visit the following sites (upon which the summaries below are based):
   - Canada's Ecozones (Canadian Biodiversity Web Site)
   http://www.canadianbiodiversity.mcgill.ca/english/ecozones/ecozones.htm
   - Canadian Ecozones (Environment Canada)
   http://www.ec.gc.ca/soer-ree/English/vignettes/default.cfm

Terrestrial Ecozones

Arctic Cordillera

- Geography & Geology: mountains, valleys, bedrock, ice caps and glaciers
- Climate: cold (summer temperatures -2ºC to 6ºC, winter temp. -35ºC), dry (annual precipitation 200–600 mm) and windy
- Plant Life: scarce due to harsh weather and little soil -- examples include arctic willow, arctic black spruce, purple saxifrage
- Animal Life: scarce; examples include polar bears, caribou, wolves and seabirds
- Human Activity: about 1000 people, most are Inuit; hunting, fishing and trapping main activities; some oil & gas exploration

Northern Arctic

- Geography & Geology: flat or gently rolling terrain; sedimentary rock in the west, granite in the east
- Climate: coldest, driest area in Canada (annual average temperature -3ºC, annual precipitation 100–200 mm); permafrost
- Plant Life: scarce due to harsh weather and little soil -- examples include mountain avens, purple saxifrage, arctic poppy, lichens, mosses
- Animal Life: examples include muskox, polar bears, caribou, migratory birds
- Human Activity: about 15,000 people, most are Inuit; hunting, fishing and trapping main activities; some oil & gas exploration and tourism

Southern Arctic

- Geography & Geology: soil and rocks left behind by retreating glaciers; tundra; granite bedrock; clear, cold lakes
- Climate: cold, long winters (average temperature -28ºC to -18ºC); cool, short summers (av. temp. 5ºC); annual precipitation 250–500 mm; permafrost

- Plant Life: low shrubs, lichens, sedges; few trees due to extreme climate
- Animal Life: mammals such as caribou, bears (grizzly, black & polar), moose, arctic ground squirrels; birds such as snow geese, gyrfalcon, rock ptarmigan
- Human Activity: about 10,000 people, most are Inuit; hunting, fishing and trapping main activities; some oil & gas exploration and tourism

Taiga Plains

- Geography & Geology: terrain flat or gently rolling; sedimentary rock; Great Slave Lake, Great Bear Lake, Mackenzie River; canyons
- Climate: cold, long winters (average temperature -26ºC to -15ºC); cool, short summers (av. temp. 7ºC to 14ºC); annual precipitation 200–500 mm; permafrost
- Plant Life: trees such as aspen, willow, birch, spruce, tamarack, alder, jack pine; smaller plants such as sedges, shrubs, wild rose, mosses, lichens, blueberry
- Animal Life: mammals such as wolves, black bears, caribou, bison and moose; birds such as peregrine falcons, bald eagles and sharp-tailed grouse; frogs, fish, insects and molluscs
- Human Activity: about 22,000 people; hunting, fishing and trapping; oil & gas exploration, forestry and mining; many areas almost untouched by humans

Taiga Shield

- Geography & Geology: part of Canadian Shield; very old bedrock; rolling hills and plains; many lakes and ponds
- Climate: cold, long winters and cool, short summers (annual average temperature just below 0ºC; summer av. temp. 11ºC); annual precipitation 200–1000 mm; some permafrost
- Plant Life: open forests, meadows and wetlands; trees such as spruce, jack pine, tamarack, aspen; smaller plants such as lichens, mosses, sedges, gooseberries, Labrador tea
- Animal Life: mammals such as moose, caribou, grizzly bears, black bears, wolverines and beavers; many shorebirds & migratory birds; many species of fish; a few amphibians; insects and molluscs
- Human Activity: about 340,000 people, more than half are native people; hunting, fishing and trapping; mining; many areas almost untouched by humans

Taiga Cordillera

- Geography & Geology: northern Rocky Mountains; rivers, valleys, canyons, waterfalls; some tundra, rolling hills and wetlands
- Climate: cold, long winters (average temperature -22ºC); cool, short summers (av. temp. 8ºC) average annual precipitation 250–300 mm
- Plant Life: trees such as aspen, birch, spruce, willow and lodgepole pine; smaller plants such as purple mountain saxifrage, mountain avens, sedges and shrubs
- Animal Life: mammals such as black and grizzly bears, caribou, Dall sheep, wolves, lynx, pikas and beavers; many species of birds including osprey, red-tailed hawks and arctic loons; fish such as northern pike; insects and molluscs
- Human Activity: people number in the hundreds; hunting, fishing and trapping; some tourism

Hudson Plains

- Geography & Geology: flat with bogs and wetlands; one of the world's biggest continuous wetlands; land slopes gently down to Hudson Bay; sedimentary bedrock; tundra in the north, taiga in the south
- Climate: summer average temperature 11ºC; winter av. temp. -18ºC; annual precipitation 400–800 mm
- Plant Life: the north is treeless; the south has trees such as tamarack, birch, spruce, aspen and willow; smaller plants such as purple saxifrage, shrubs, mosses, lichens, arctic avens
- Animal Life: wide range of mammals including moose, caribou, bears (polar, grizzly and black) and wolves; birds such as red-tailed hawks, common snipe and snow geese; a few species of frogs and molluscs; fish such as northern pike and lake whitefish; enormous numbers of biting insects
- Human Activity: about 10,000 people; hunting, fishing and trapping

Boreal Plains

- Geography & Geology: plains, valleys and low hills; shale bedrock; thick soil; lakes left over from glaciers
- Climate: cold, long winters (average temperature -17.5ºC to -11ºC); warm, short summers; annual precipitation 300–625 mm
- Plant Life: forests with trees such as spruce, birch, jack pine, fir, poplar, aspen, tamarack; species adapted to wildfire
- Animal Life: mammals such as wolves, black bears, bison, caribou, moose, beavers and badgers; birds such as turkey vultures, great horned owls, whooping cranes, sandhill cranes; frogs, garter snakes and molluscs; fish such as lake sturgeon, trout and perch
- Human Activity: about 750,000 people, most in small communities; oil & gas exploration; mining; forestry

Boreal Shield

- Geography & Geology: rocky hills, forests; millions of lakes, rivers and wetlands left over from glaciers; exposed granite bedrock; Canada's biggest ecozone, covering 20 percent of the country
- Climate: cold, long winters (average temperature -20ºC to -1ºC); warm, short summers (av. temp. 13ºC); annual precipitation 400–1600 mm
- Plant Life: forests of jack pine, spruce, fir, birch, aspen and poplar; species adapted to wildfire; smaller plants such as water lilies, sedges, shrubs, mosses, cattails and goldenrod
- Animal Life: mammals such as moose, caribou, wolves, black bears, beavers, martens and porcupines; birds such as boreal owls, loons, ravens and great blue herons; frogs, salamanders and garter snakes; a wide range of fish, molluscs and insects
- Human Activity: about 3 million people; forestry, mining and hydroelectric projects; acid rain

Boreal Cordillera

- Geography & Geology: mountains, plateaus, valleys and lowlands; glacial deposits
- Climate: cold, long winters (average temperature -18ºC); warm, short summers (av. temp. 10ºC); annual precipitation 300–1500 mm; permafrost

- Plant Life: trees such as lodgepole pine, spruce, birch and aspen at lower elevations; mosses, shrubs and lichens at higher elevations; other plants such as mountain avens and Labrador tea
- Animal Life: mammals such as Dall sheep, moose, wolves, black and grizzly bears, bison, mountain goats, beavers and arctic ground squirrels; birds such as Canada geese, snowy owls, herring gulls and rock ptarmigans; molluscs and wood frogs; fish such as northern pike, lake whitefish, spawning salmon
- Human Activity: about 31,000 people, most in Whitehorse; forestry, mining, tourism

Pacific Maritime

- Geography & Geology: mountains, fjords, glaciers and hot springs
- Climate: mild, wet winters (average temperature -1.5ºC); cool to warm summers (av. temp. 13ºC); annual precipitation 600–4000 mm
- Plant Life: huge trees at lower elevations; trees such as cedar, hemlock, fir, lodgepole pine, spruce and dogwood; smaller plants include skunk cabbage, arbutus, salal and sword fern
- Animal Life: mammals such as black and grizzly bears, deer, moose, elk, wolves, caribou and pikas; birds such as bald eagles, spotted sandpipers, trumpeter swans and sandhill cranes; wide range of amphibians; some turtles, snakes and lizards; wide range of fish and insects; molluscs
- Human Activity: more than 2.5 million people and growing, many in large urban centres; growth of cities, fishing, forestry and other human activities put strain on ecosystems

Montane Cordillera

- Geography & Geology: diverse; includes mountains, desert, valleys, glacial moraine, forests, tundra, many lakes and rivers
- Climate: varies widely between regions, but generally cool, wet winters; dry, warm summers; average annual temperature 0.5ºC in north, 7.5ºC in south; annual precipitation 300–1500 mm
- Plant Life: varies widely between regions; trees include spruce, Douglas fir, cedar, ponderosa pine, larch; smaller plants include sagebrush, bunchgrass, mountain avens, lichens, shrubs, herbs
- Animal Life: mammals such as bighorn sheep, mountain goats, elk, deer, moose, wolves, grizzly and black bears, marmots and beavers; birds such as burrowing owls, common snipe, blue grouse, Steller's jay; various frogs, toads and salamanders; rattlesnakes and lizards; wide range of fish and insects; molluscs
- Human Activity: mining, forestry, cattle grazing, tourism and population growth put strain on ecosystems

Prairies

- Geography & Geology: flat or rolling plains; fertile soil left behind by glaciers; sedimentary bedrock
- Climate: long, cold winters (average temperature -10ºC), short, warm summers (av. temp. 15ºC); annual precipitation 250–700 mm
- Plant Life: more than 90% of land converted to farmland; only a tiny fraction of the original tall-grass, mixed-grass and short-grass prairie remain; trees such as spruce, tamarack, aspen and poplar in the east; smaller plants such as sagebrush, prickly pear, cattails, prairie sedge

- Animal Life: mammals such as black bear, moose, elk, deer, beavers, coyotes and badgers; birds such as burrowing owls, ferruginous hawks and piping plovers; numerous frogs, toads, salamanders; prairie skinks, rattlesnakes and garter snakes; fish such as carp and northern pike; wide range of insects; molluscs
- Human Activity: more than 3.8 million people, 80% in cities; farming, livestock, oil & gas extraction, mining

Atlantic Maritime

- Geography & Geology: sedimentary and igneous bedrock; acidic soils in the interior; soil in lowlands better for agriculture
- Climate: cool winters (average temperature -5ºC), cool summers (av. temp. 14ºC); annual precipitation 900–1500 mm
- Plant Life: forests feature trees such as maple, birch, beech, spruce, balsam fir; smaller plants such as lady slipper, wild lupines and blueberries
- Animal Life: mammals such as black bears, bobcats, raccoons, moose and deer; birds such as Atlantic puffins, osprey, cormorants and murres; numerous frogs, toads, salamanders; numerous fish, insects and molluscs
- Human Activity: about 2.5 million people, about half in rural areas; fishing, forestry, tourism, farming; overfishing led to collapse of cod fishery

Mixedwood Plains

- Geography & Geology: plains, rolling hills, three great lakes, St. Lawrence River; fertile soil left behind by glaciers; Canada's smallest ecozone
- Climate: cool winters (average temperature -5ºC), warm summers (av. temp. 17ºC); annual precipitation 720–1000 mm
- Plant Life: much of original forest lost to farming and development; trees such as maple, elm, oak, white and red pine, birch; Carolinian forest in south
- Animal Life: mammals such as wolves, moose, deer, black bears, bobcats, flying squirrels; birds such as red-shouldered hawks, screech owls and blue jays; many species of frogs and salamanders; numerous species of snakes, turtles, fish, molluscs and insects
- Human Activity: home to half the population of Canada; also home to half the country's species at risk; much of the country's industry is based here; population density contributes to high levels of pollution & puts strain on ecosystems; introduced species such as zebra mussel create ecological havoc

Marine Ecozones

Pacific Marine

- Geography & Geology: ocean, rivers, fjords, coastal mountains & islands, continental shelf & slope; Alaska acts as barrier to colder arctic waters
- Climate: temperate waters; little variation in ocean surface temperature (about 7ºC total range between seasons); sea ice rarely seen
- Plant Life: seaweed, giant kelp, coral reefs, algae, phytoplankton; eelgrass in coastal mud flats and salt marshes
- Animal Life: wide range of mammals such as killer whales, grey whales, seals and sea otters; wide range of birds such as osprey, bald eagles, geese, ducks, gulls and other shorebirds and seabirds; wide range of fish such as coho, pink,

sockeye and other species of salmon, halibut, herring, white sturgeon; many crustaceans; more than 3800 species of invertebrates
- Human Activity: shipping, fishing, tourism and recreation; pollution, habitat loss and overfishing have put great strain on ecosystems

Arctic Basin Marine
- Geography & Geology: ocean; this ecozone is underneath permanent ice sheets, icebergs and pack ice; the Canada Basin lies 3.6 km below ocean surface
- Climate: frigid waters; above the ocean surface, bitterly cold, long winters (average temperature -35ºC), chilly, short summers (av. temp. 5°C); very dry (annual precipitation 100–200 mm)
- Plant Life: very limited; blooms of phytoplankton grow in waters alongside pack ice in spring and summer; algae grows on bottom of pack ice in summer
- Animal Life: fish such as arctic char, arctic cod, snailfish and sculpins; invertebrates such as clams, sea stars and anemones live along the ocean floor; mammals such as polar bears; birds such as the ivory gull; migratory birds pass through; beluga whales, narwhals, seals and walruses live in southern waters
- Human Activity: no permanent residents due to lack of land; scientific expeditions; some oil & gas exploration; toxic substances such as PCBs have entered the food chain

Arctic Archipelago Marine
- Geography & Geology: ocean, average depth 150–500 metres; fjords; solid ice sheets between islands in winter; broken ice sheets & icebergs in summer (mostly ice-free in southeast)
- Climate: frigid waters; above the ocean surface, bitterly cold, long winters (average temperature -30ºC), cool, short summers (av. temp. 10°C)
- Plant Life: limited; blooms of phytoplankton grow in waters alongside pack ice in summer; kelp forests in intertidal zones in the south in summer
- Animal Life: mammals such as polar bears, seals, walruses, narwhals and beluga whales; migratory birds in summer; birds such as arctic terns, peregrine falcons, tundra swans, ducks and geese; fish such as arctic char, shrimp and scallops; many crustaceans; some molluscs
- Human Activity: many residents are Inuit; fishing, trapping, hunting; oil & gas exploration; mineral exploration; some tourism; hydroelectric power production along rivers in the southeast (James Bay); toxic substances such as PCBs have been found here

Northwest Atlantic Marine
- Geography & Geology: ocean (water depths 200–300 metres) & much of the St. Lawrence River; cliffs, fjords and coastal beaches; sea ice common, melts in south in summer
- Climate: frigid northern waters (below 0ºC all year; sea salt prevents freezing) meet warmer waters from St. Lawrence River and Gulf Stream
- Plant Life: in north, limited (algae); in south, algae, phytoplankton, seaweed & kelp
- Animal Life: mammals such as humpback, minke and blue whales, porpoises and seals; fish such as Atlantic tomcod, sea lamprey and Atlantic salmon; birds such as puffins, gullls, murres and cormorants; crustaceans such as crab, shrimp and lobster

- Human Activity: in the north, hunting, fishing (subsistence and commercial) and trapping; in the south, fishing, shipping and tourism; higher population in south linked to pollution and habitat loss; overfishing nearly eliminated Atlantic cod stocks

Atlantic Marine

- Geography & Geology: ocean (depths of 150 metres on Grand Banks, dropping to thousands of metres further offshore); includes Bay of Fundy and its 15-metre tides; fjords, icebergs
- Climate: frigid northern waters (below 0ºC all year; sea salt prevents freezing) meet warmer waters from Gulf Stream; off Newfoundland, fog frequently results; summer ocean surface temperature ranges from 10ºC to 23ºC
- Plant Life: phytoplankton blooms; kelp and seaweed in intertidal zones; salt marshes along coasts of New Brunswick, Nova Scotia and PEI (less so in Newfoundland & Labrador) are home to salt-resistant grasses and sea lavender
- Animal Life: mammals such as seals, porpoises, dolphins, whales (beluga, right, minke, fin and blue); birds such as puffins, murres, terns, cormorants and eiders; fish such as Atlantic cod, hake, herring and turbot; many crustaceans, molluscs and other invertebrates
- Human Activity: shipping, fishing, aquaculture, oil & gas production, whale watching; overfishing nearly eliminated Atlantic cod stocks

Game Materials

Things You May Photocopy or Print

The following materials may be copied or printed when needed for classroom use:

City - Animal Cross-Reference: A chart listing the cities alongside the animals that can be found near each. (page 26; also as Portable Document Format [PDF] file on CD)

- *(CD-ROM)\Canada_PS\Game Materials\city_animal_card.pdf*

Animal - City Cross-Reference: A chart listing the 50 animals and the cities near which they can be found. (page 27; also as PDF file on CD)

- *(CD-ROM)\Canada_PS\Game Materials\animal_city_card.pdf*

Animal Types Activity (see page 28)

Animal Classification Chart (see page 32)

Canadian Postal Abbreviations (see page 33)

Route Planning Guide: A sheet to help you plan your journey across Canada. Fill in city names, animal locations, and driving distances required. (see page 34)

Small Maps:
Small Map 1 shows Canada's ecozones and includes the Animal - City Cross-Reference chart. It also shows the names of cities, provinces and territories. (see page 35; also, colour PDF file on CD)

- *(CD-ROM)\Canada_PS\Game Materials\small_map1.pdf*

Small Map 2 also shows Canada's ecozones and the locations of cities. But it leaves out the names of cities, provinces and territories. You can use this map to test students' knowledge of the names of cities, provinces and territories as well as capitals. (see page 35; also, colour PDF file on CD)

- *(CD-ROM)\Canada_PS\Game Materials\small_map2.pdf*

CROSSCOUNTRY CANADA PHOTO SAFARI

CITY - ANIMAL CROSS-REFERENCE

CITY	ANIMALS
Argentia, NL	Leatherback seaturtle
Baie-Comeau, QC	Atlantic cod
	Humpback whale
Banff, AB	Banff springs snail
Bathurst, NB	Maritime ringlet
Brandon, MB	Sprague's pipit
Calgary, AB	Piping plover
Campbell River, BC	Marbled murrelet
Channel-Port aux Basques, NL	Atlantic cod
Chibougamau, QC	Woodland caribou
Chicoutimi, QC	Bicknell's thrush
Corner Brook, NL	Harlequin duck
Cranbrook, BC	American badger
	Grizzly bear
	Rocky Mountain tailed frog
Dawson City, YT	Peregrine falcon
Digby, NS	Blanding's turtle
	Harlequin duck
Drummondville, QC	Red-shouldered hawk
Fort McMurray, AB	Wolverine
Fort Nelson, BC	Wood bison
Fort Providence, NT	Woodland caribou
Fort Simpson, NT	Grizzly bear
Fredericton, NB	Bicknell's thrush
Halifax, NS	Atlantic cod
	Leatherback seaturtle
Hamilton, ON	American badger
Hay River, NT	Northern leopard frog
	Whooping crane
	Wood bison
Inuvik, NT	Beluga whale
	Polar bear
Iqaluit, NU	Polar bear
Jasper, AB	Grizzly bear
Kamloops, BC	American badger
Kelowna, BC	Great Basin spadefoot
	Nightsnake
	Pallid bat

CITY	ANIMALS
Kenora, ON	Piping plover
Kingston, ON	Eastern ratsnake
Kitchener, ON	Henslow's sparrow
Labrador City, NL	Harlequin duck
	Wolverine
Lethbridge, AB	Burrowing owl
	Northern leopard frog
London, ON	Eastern hog-nosed snake
	Northern riffleshell
	Spiny softshell
Medicine Hat, AB	Greater sage-grouse
	Sprague's pipit
	Swift fox
Moncton, NB	Monarch
Montréal, QC	Allegheny mountain dusky salamander
	Spiny softshell
Nanaimo, BC	Vancouver Island marmot
Niagara Falls, ON	Eastern ratsnake
Ottawa, ON	Red-shouldered hawk
Port Hardy, BC	Sea otter
Prince Albert, SK	Sprague's pipit
Prince George, BC	White sturgeon
Prince Rupert, BC	Humpback whale
	Killer whale
	Marbled murrelet
Québec City, QC	Monarch
Regina, SK	Burrowing owl
Saint John, NB	Atlantic salmon
Saskatoon, SK	Monarch
Sept-Îles, QC	Beluga whale
St. John's, NL	Humpback whale
Sudbury, ON	Eastern hog-nosed snake
	Massasauga
Summerside, PE	Piping plover
Sydney, NS	Bicknell's thrush

CITY	ANIMALS
Thompson, MB	Woodland caribou
Thunder Bay, ON	Peregrine falcon
Toronto, ON	Red-shouldered hawk
Trail, BC	White sturgeon
Trois-Rivières, QC	Peregrine falcon
Truro, NS	Atlantic salmon
Vancouver, BC	Northern spotted owl
	Sockeye salmon
	White sturgeon
Victoria, BC	Killer whale
Whitehorse, YT	Wood bison
Windsor, ON	Blue racer
	Lake Erie watersnake
	Northern cricket frog
Winnipeg, MB	Northern leopard frog
Yarmouth, NS	Atlantic whitefish
	North Atlantic right whale
	Roseate tern
Yellowknife, NT	Wolverine

**Note:* A Portable Document Format (PDF) file of this card can be found on your Crosscountry Canada Photo Safari CD-ROM\Canada_PS. Look in the 'Game Materials' folder for 'city_animal_card.pdf'. To print this file, you'll need the free Adobe Reader software from http://www.adobe.com/products/acrobat/readstep2.html

CROSSCOUNTRY CANADA PHOTO SAFARI

ANIMAL - CITY CROSS-REFERENCE

ANIMAL	CITIES AVAILABLE
Allegheny mountain dusky salamander	Montréal, QC
American badger	Cranbrook, BC Hamilton, ON Kamloops, BC
Atlantic cod	Baie-Comeau, QC Channel-Port aux Basques, NL Halifax, NS
Atlantic salmon	Saint John, NB Truro, NS
Atlantic whitefish	Yarmouth, NS
Banff springs snail	Banff, AB
Beluga whale	Inuvik, NT Sept-Îles, QC
Bicknell's thrush	Chicoutimi, QC Fredericton, NB Sydney, NS
Blanding's turtle	Digby, NS
Blue racer	Windsor, ON
Burrowing owl	Lethbridge, AB Regina, SK
Eastern hog-nosed snake	London, ON Sudbury, ON
Eastern ratsnake	Kingston, ON Niagara Falls, ON
Great Basin spadefoot	Kelowna, BC
Greater sage-grouse	Medicine Hat, AB
Grizzly bear	Cranbrook, BC Fort Simpson, NT Jasper, AB
Harlequin duck	Corner Brook, NL Digby, NS Labrador City, NL
Henslow's sparrow	Kitchener, ON
Humpback whale	Baie-Comeau, QC Prince Rupert, BC St. John's, NL
Killer whale	Prince Rupert, BC Victoria, BC
Lake Erie watersnake	Windsor, ON
Leatherback seaturtle	Argentia, NL Halifax, NS
Marbled murrelet	Campbell River, BC Prince Rupert, BC
Maritime ringlet	Bathurst, NB
Massasauga	Sudbury, ON
Monarch	Moncton, NB Québec City, QC Saskatoon, SK
Nightsnake	Kelowna, BC
North Atlantic right whale	Yarmouth, NS
Northern cricket frog	Windsor, ON
Northern leopard frog	Hay River, NT Lethbridge, AB Winnipeg, MB
Northern riffleshell	London, ON
Northern spotted owl	Vancouver, BC
Pallid bat	Kelowna, BC
Peregrine falcon	Dawson City, YT Thunder Bay, ON Trois-Rivières, QC
Piping plover	Calgary, AB Kenora, ON Summerside, PE
Polar bear	Inuvik, NT Iqaluit, NU
Red-shouldered hawk	Drummondville, QC Ottawa, ON Toronto, ON
Rocky Mountain tailed frog	Cranbrook, BC
Roseate tern	Yarmouth, NS
Sea otter	Port Hardy, BC
Sockeye salmon	Vancouver, BC
Spiny softshell	London, ON Montréal, QC
Sprague's pipit	Brandon, MB Medicine Hat, AB Prince Albert, SK
Swift fox	Medicine Hat, AB
Vancouver Island marmot	Nanaimo, BC
White sturgeon	Prince George, BC Trail, BC Vancouver, BC
Whooping crane	Hay River, NT
Wolverine	Fort McMurray, AB Labrador City, NL Yellowknife, NT
Wood bison	Fort Nelson, BC Hay River, NT Whitehorse, YT
Woodland caribou	Chibougamau, QC Fort Providence, NT Thompson, MB

**Note:* A Portable Document Format (PDF) file of this card can be found on your Crosscountry Canada Photo Safari CD-ROM\Canada_PS. Look in the 'Game Materials' folder for 'animal_city_card.pdf'. To print this file, you'll need the free Adobe Reader software from http://www.adobe.com/products/acrobat/readstep2.html

Animal Types Activity

Each animal in *Photo Safari* belongs to a bigger group (or type) of animals. The members of each group may be very different. But they have many things in common.

Your job is to decide which animal belongs to which group. Read about each animal group below. Then look at the Animal Names list at right. Write the name of each animal in its proper group.

INVERTEBRATES
We do not have backbones. We come in many shapes and sizes. Many of us are insects, spiders, worms or molluscs. There are so many of us, we make up most of the animals on Earth!

1. _____
2. _____
3. _____
4. _____

FISH
We have backbones, and we are cold-blooded. Most of us have scales. Many of us live in the ocean. Some of us live in lakes, rivers or creeks. We breathe with our gills.

1. _____
2. _____
3. _____
4. _____
5. _____

AMPHIBIANS
We have backbones, and we are cold-blooded. Most of us have smooth, moist skin. We can live in water and on land.

When we are babies, most of us live in water. Then we breathe with our gills.

ANIMAL NAMES
Allegheny Mountain dusky salamander
American badger
Atlantic cod
Atlantic salmon
Atlantic whitefish
Banff springs snail
Beluga whale
Bicknell's thrush
Blanding's turtle
Blue racer
Burrowing owl
Eastern hog-nosed snake
Eastern ratsnake
Great Basin spadefoot
Greater sage-grouse
Grizzly bear
Harlequin duck
Henslow's sparrow
Humpback whale
Killer whale
Lake Erie watersnake
Leatherback seaturtle
Marbled murrelet
Maritime ringlet
Massasauga
Monarch
Nightsnake
North Atlantic right whale
Northern cricket frog
Northern leopard frog
Northern riffleshell
Northern spotted owl
Pallid bat
Peregrine falcon
Piping plover
Polar bear
Red-shouldered hawk
Rocky Mountain tailed frog
Roseate tern
Sea otter
Sockeye salmon
Spiny softshell
Sprague's pipit
Swift fox
Vancouver Island marmot
White sturgeon
Whooping crane
Wolverine
Wood bison
Woodland caribou

AMPHIBIANS (CONTINUED)
When we are adults, we live on land near water. Then we breathe with our lungs and/or through our skin.

1. _____
2. _____
3. _____
4. _____
5. _____

REPTILES
We have backbones, and we are cold-blooded. Most of us have scales on our dry skin. We breathe with our lungs.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

BIRDS
We have backbones, feathers and a bill. We are warm-blooded. We breathe with our lungs and air sacs. Most of us can fly.

1. _____
2. _____
3. _____
4. _____
5. _____

BIRDS (CONTINUED)

6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____

MAMMALS

We are warm-blooded, and we have backbones. When we are babies, we drink our mother's milk. We have hair or fur.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____

Animal Types Activity – Answer Key

INVERTEBRATES

1. Banff springs snail
2. Maritime ringlet
3. Monarch
4. Northern riffleshell

FISH

1. Atlantic cod
2. Atlantic salmon
3. Atlantic whitefish
4. Sockeye salmon
5. White sturgeon

AMPHIBIANS

1. Allegheny mountain dusky salamander
2. Great Basin spadefoot
3. Northern cricket frog
4. Northern leopard frog
5. Rocky Mountain tailed frog

REPTILES

1. Blanding's turtle
2. Blue racer
3. Eastern hog-nosed snake
4. Eastern ratsnake
5. Lake Erie watersnake
6. Leatherback seaturtle
7. Massasauga
8. Nightsnake
9. Spiny softshell

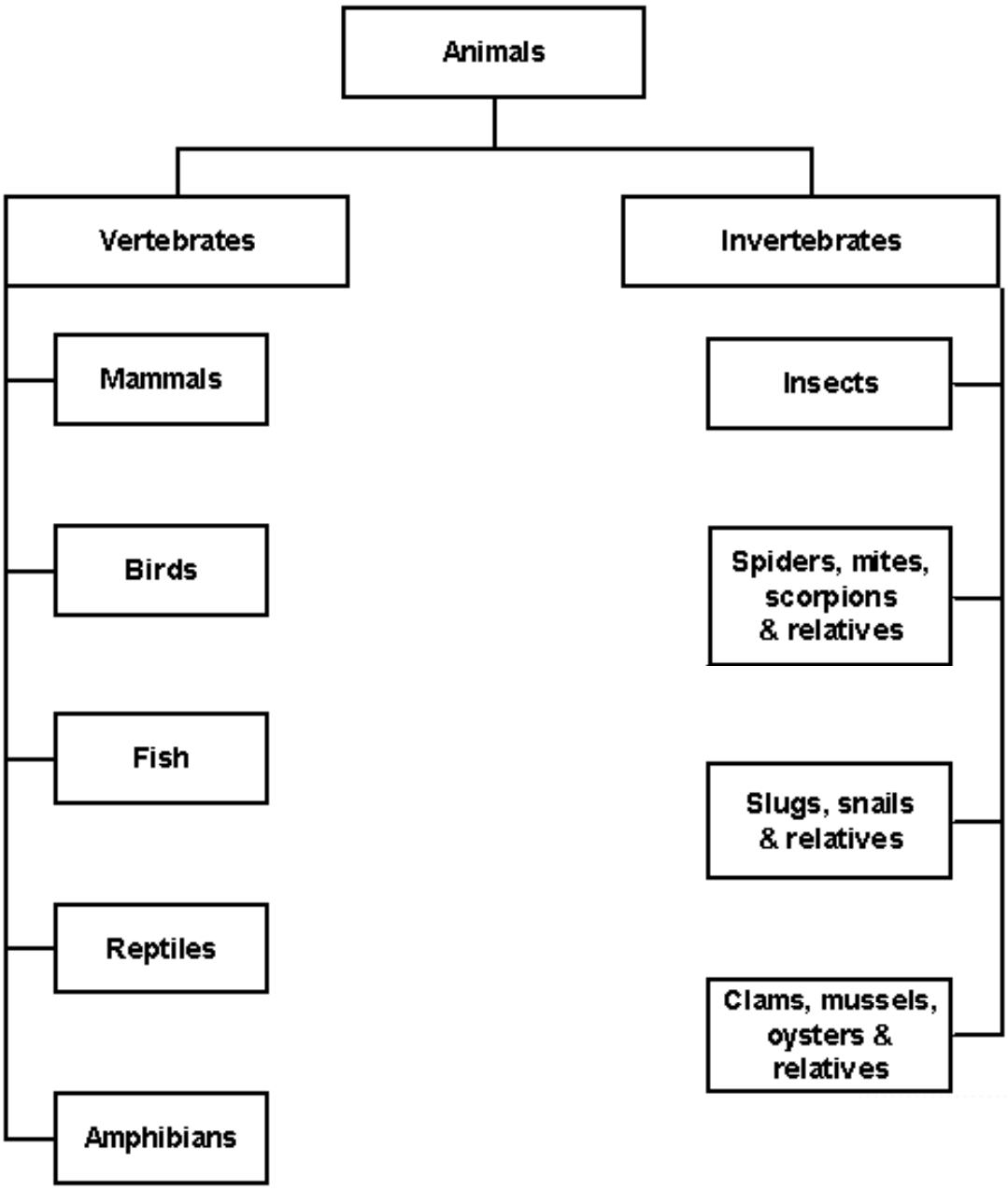
BIRDS

1. Bicknell's thrush
2. Burrowing owl
3. Greater sage-grouse
4. Harlequin duck
5. Henslow's sparrow
6. Marbled murrelet
7. Northern spotted owl
8. Peregrine falcon
9. Piping plover
10. Red-shouldered hawk
11. Roseate tern
12. Sprague's pipit
13. Whooping crane

MAMMALS

1. American badger
2. Beluga whale
3. Grizzly bear
4. Humpback whale
5. Killer whale
6. North Atlantic right whale
7. Pallid bat
8. Polar bear
9. Sea otter
10. Swift fox
11. Vancouver Island marmot
12. Wolverine
13. Wood bison
14. Woodland caribou

Animal Classification Chart



**Notes:*
The chart above shows how we have grouped the animals in Crosscountry Canada Photo Safari. Because the program was designed for students in grades 1 to 3, we have kept the chart as simple as possible (i.e. it does not strictly adhere to formal taxonomic guidelines).

Many classes of animals are not included here. And while spiders & relatives do not appear in the program, we have included them in the chart as a reminder that they make up a class separate from insects.

Canadian Postal Abbreviations

ALBERTA	AB
BRITISH COLUMBIA	BC
MANITOBA	MB
NEW BRUNSWICK	NB
NEWFOUNDLAND & LABRADOR	NL
NOVA SCOTIA	NS
NUNAVUT TERRITORY	NU
NORTHWEST TERRITORIES	NT
ONTARIO	ON
PRINCE EDWARD ISLAND	PE
QUÉBEC	QC
SASKATCHEWAN	SK
YUKON TERRITORY	YT

Route Planning Guide

Name _____ Date _____

Starting City _____ Animals to Photograph:

_____

Ending City _____

_____

_____

_____

_____

	Cities close to where the animal lives:	Kilometres from location of truck:
Animal: _____	_____	_____
City where truck is now:	_____	_____
_____	_____	_____
Animal: _____	_____	_____
City where truck is now:	_____	_____
_____	_____	_____
Animal: _____	_____	_____
City where truck is now:	_____	_____
_____	_____	_____
Animal: _____	_____	_____
City where truck is now:	_____	_____
_____	_____	_____
Animal: _____	_____	_____
City where truck is now:	_____	_____
_____	_____	_____

Small Maps

The next two pages feature two maps of Canada.

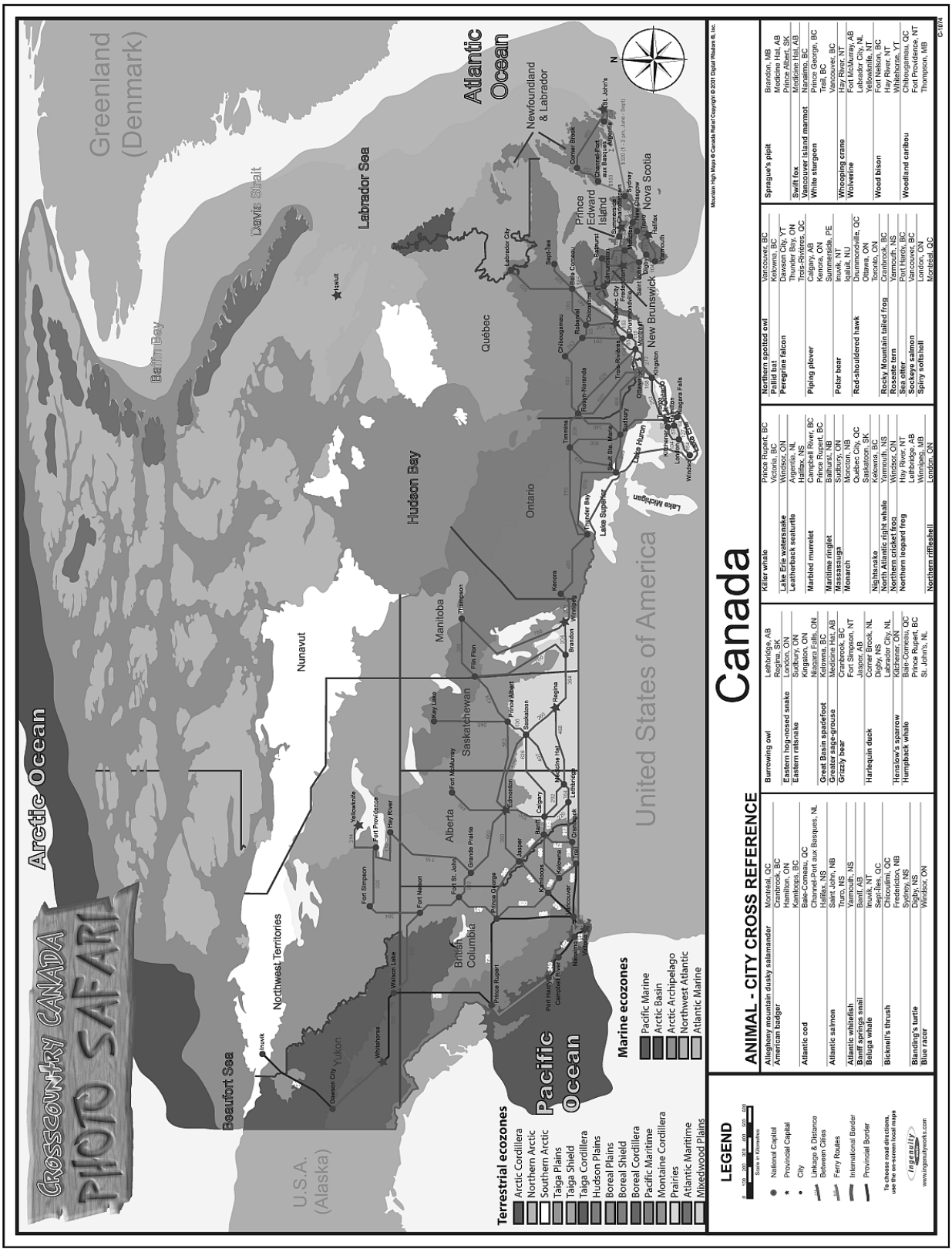
Small Map 1 shows Canada's ecozones and includes the Animal - City Cross-Reference chart. It also shows the names of cities, provinces and territories.

Small Map 2 also shows Canada's ecozones and the locations of cities. But it leaves out the names of cities, provinces and territories. You can use this map to test students' knowledge of the names of cities, provinces and territories as well as capitals.

Note:* Adobe Portable Document Format (PDF) files of these maps--in full colour**--can be found on your Crosscountry Canada Photo Safari CD-ROM. Open the 'Canada_PS' folder, and then look in the 'Game Materials' folder for 'small_map1.pdf' and 'small_map2.pdf'.

To print these files for your students, you'll need the free Adobe Reader software from http://www.adobe.com/products/acrobat/readstep2.html.

Small Map 1


Crosscountry Canada
Photo Safari
Arctic Ocean
Beaufort Sea
Northwest Territories
Nunavut
Baffin Bay
Davis Strait
Labrador Sea
Greenland (Denmark)
Hudson Bay
Atlantic Ocean
Pacific Ocean
U.S.A. (Alaska)
Yukon
British Columbia
Alberta
Saskatchewan
Manitoba
Ontario
Québec
Newfoundland & Labrador
Prince Edward Island
Nova Scotia
New Brunswick
United States of America
Lake Michigan
Lake Superior
Lake Huron
Canada
LEGEND
National Capital
Provincial Capital
City
Linkage & Distance Between Cities
Ferry Routes
International Border
Provincial Border
To choose road directions, use the on-screen local maps
Terrestrial ecozones
Arctic Cordillera
Northern Arctic
Southern Arctic
Taiga Plains
Taiga Shield
Taiga Cordillera
Hudson Plains
Boreal Plains
Boreal Shield
Boreal Cordillera
Pacific Maritime
Montane Cordillera
Prairies
Atlantic Maritime
Mixedwood Plains
Marine ecozones
Pacific Marine
Arctic Basin
Arctic Archipelago
Northwest Atlantic
Atlantic Marine
ANIMAL - CITY CROSS REFERENCE
Allegheny mountain dusky salamander
American badger
Atlantic cod
Atlantic salmon
Atlantic whitefish
Banff springs snail
Beluga whale
Bicknell's thrush
Blanding's turtle
Blue racer
Burrowing owl
Eastern hog-nosed snake
Eastern ratsnake
Great Basin spadefoot
Greater sage-grouse
Grizzly bear
Harlequin duck
Henslow's sparrow
Humpback whale
Killer whale
Lake Erie watersnake
Leatherback seaturtle
Marbled murrelet
Maritime ringlet
Massasauga
Monarch
Nightsnake
North Atlantic right whale
Northern cricket frog
Northern leopard frog
Northern riffleshell
Northern spotted owl
Pallid bat
Peregrine falcon
Piping plover
Polar bear
Red-shouldered hawk
Rocky Mountain tailed frog
Roseate tern
Sea otter
Sockeye salmon
Spiny softshell
Sprague's pipit
Swift fox
Vancouver Island marmot
White sturgeon
Whooping crane
Wolverine
Wood bison
Woodland caribou
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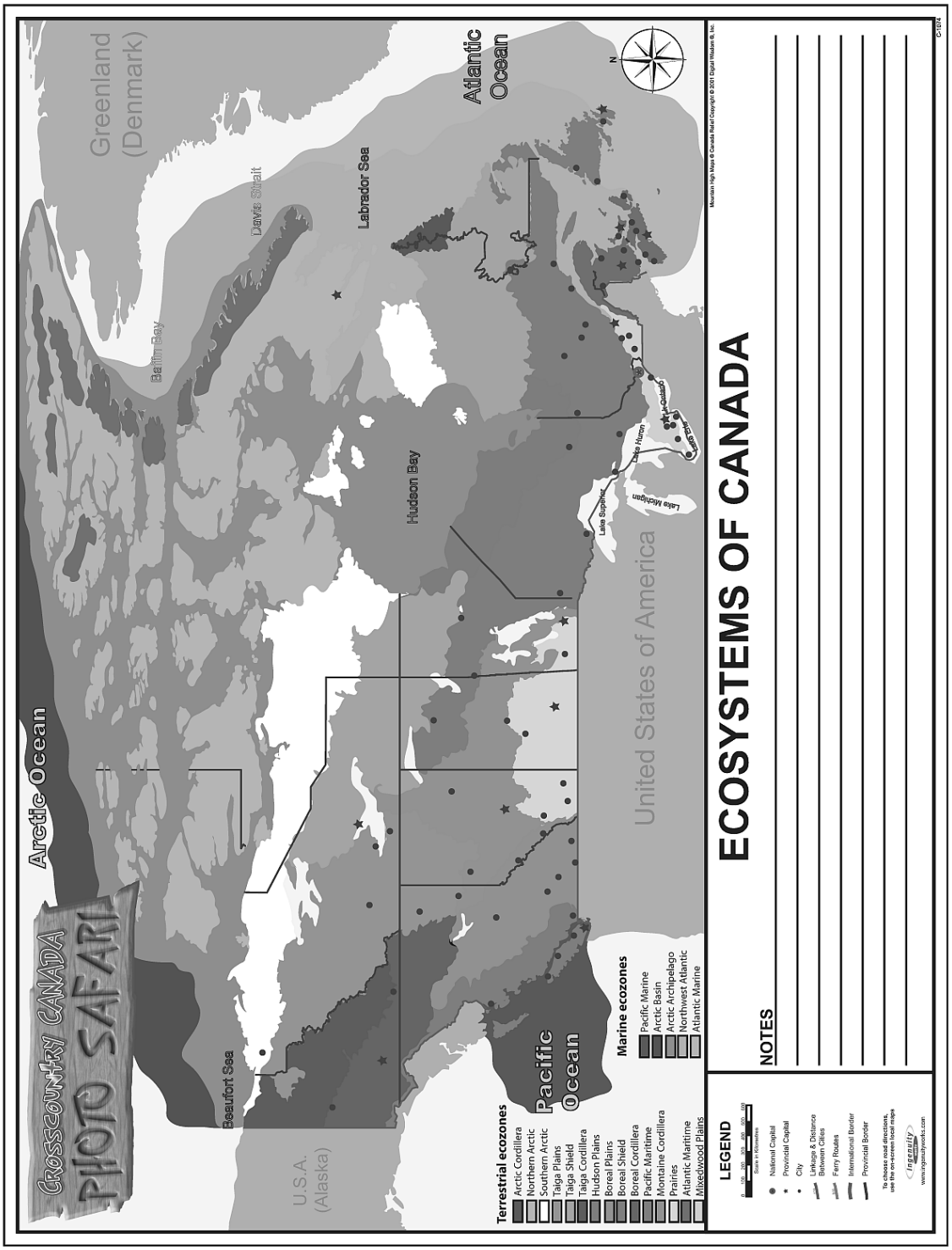
C-004

Small Map 2


Crosscountry CANADA
PHOTO SAFARI
Arctic Ocean
Greenland
(Denmark)
Baffin Bay
Davis Strait
Labrador Sea
Beaufort Sea
Hudson Bay
Atlantic
Ocean
U.S.A.
(Alaska)
Pacific
Ocean
United States of America
Lake Huron
Lake Michigan
Lake Superior
Lake Erie
Terrestrial ecozones
Arctic Cordillera
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Southern Arctic
Taiga Plains
Taiga Shield
Taiga Cordillera
Hudson Plains
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LEGEND
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www.ingenuityworks.com
ECOSYSTEMS OF CANADA
NOTES

Web Links

Species at Risk
http://www.speciesatrisk.gc.ca
Grades: 3–12
This Environment Canada site is full of authoritative information on endangered and threatened species. Includes profiles and current status of each species, range maps, recovery plan information and a glossary.

World Wildlife Fund Canada
http://www.wwf.ca
Grades: 6–12
World Wildlife Fund is a very good, comprehensive site to get the latest news and interesting articles related to endangered wildlife. Includes a 'Kids and Teachers Site' with special features, lesson plans and other resources.

Hinterland Who's Who
http://www.hww.ca
Grades: 3–12
Engaging, well-written and -researched site from the Canadian Wildlife Federation and the Canadian Wildlife Service. Features profiles of various Canadian animals, particularly mammals and birds. Includes a video and sound clips library featuring the classic Hinterland Who's Who public service announcements.

NatureServe Explorer
http://www.natureserve.org/explorer
Grades: 6–12
This searchable site contains conservation status, classification, life histories, ecological concerns, habitat, distribution information, etc. for over 65,000 plants, animals and ecological communities in Canada and the United States. Includes a glossary and information section.

Parks Canada
http://www.pc.gc.ca
Grades: 3–12
The web gateway to Canada's national parks, national historic sites, and marine conservation areas. Features profiles of all parks and sites, as well as information about species at risk in the parks. The 'Teacher's Corner' features lesson plans matched to provincial and territorial curricula.

Little Animals Activity Centre
http://www.bbc.co.uk/schools/laac/index.shtml
Grades: K–3
The Little Animals Activity Centre is a BBC web site that contains games, stories and activities for 4 to 8 year olds. It is easy to navigate and contains a section for teachers and parents.